

# ZERO BEAT

HAMPDEN COUNTY RADIO ASSOCIATION, INC.

June

1980

Springfield, Mass.

ARRL Affiliated, 31st Year

June, 1980

## HAMPDEN COUNTY RADIO ASS'N

### ANNUAL BANQUET

FRIDAY, MAY 30, 1980

### FEEDING HILLS CONGREGATIONAL CHURCH

The HCRA banquet will be held the weekend after the Memorial Day weekend and promises to be a pleasant evening for all. We have been assured a very generous roast beef dinner with fruit cup, salad and dessert.

Tickets will be available from club officers, and the board of directors whose telephone numbers are on page two of this issue of Zero Beat. Tickets are \$ 6.50 per person and must be purchased no later than Friday, May 23rd. No tickets will be available at the door.

### FIELD DAY 1980

Field day, June 28 and 29, is rapidly approaching and the HCRA will gather at Camp Barber in West Granville, Mass. for the occasion. Camp Barber sounds great for the big event and maybe your XYL and kiddies will enjoy this one.

The camp has a large area for camping, a large building, a large kitchen, hot and cold running water. Two ponds for fishing, 20 miles of hiking trails, trails for motorcycles and no neighbors.

Plans are forming for this annual event which is a combination technical and social weekend for the HCRA.

"Band Captains" have been appointed and you are encouraged to let one or all of the "Band Captains" know if he has your support and help at anytime throughout the weekend, day or night, in keeping the activities going. Only licensed amateurs

may operate because of potential international third party restrictions but would be amateurs can provide a great deal of help in logging. It is also a great opportunity to learn.

### Band Captains

80 meters	Art, John,	W1KK AC1T
40 meters	Andy	WB1BZW
20 meters	Jeff	K1BE
15 meters	Al Ron	WB1EMN WB1ETS
10 meters	Paul	W1ZKT

Everyone is invited. The Club will provide the location, each will bring their own food and refreshments. Camp Barber is very easy to find: Go to Southwick, Mass. center and go west on route 57 for 12 miles. THIS IS TO BE MEASURED FROM THE JUNCTION OF ROUTES 57 and 10 AT WHICH THE COUNTRY COLONIAL GIFT SHOP AND THE SOUTHWICK INN ARE LOCATED.

At the end of twelve miles you will be at a DANGEROUS INTERSECTION. Turn right at Benton's Store (Beech Hill Road) and go about two miles to the end of the paved road. Stop, turn left into the camp. Be sure to bring insect repellent and enjoy -



HAMPDEN COUNTY RADIO  
ASSOCIATION, INC.

PRESIDENT

Larry Soltz WB1CJH 567 3444

VICE PRESIDENT

Ron Beauchemin WB1ETS 593 9852

SECRETARY

Andre Bouchard WB1BZW 786 2301

TREASURER

Paul Kress WALZKT 568 8291

DIRECTORS

Moe Beauchemin	WB1FIP
Jeffery Duquette	K1BE
Al Sittard	WB1EMN
Ollie Passburg	N1AFK
Jack Lo Monaco	WALYYK
Steve Shore	WALZEV
Ray Morin	KALCRG
Jack Dumont	K1ZQB

during the past eight months and the coming year will be more attractive since all the initial oddities of producing a club paper been overcome.

This paper has been very fortunate in that we have had solid support from many people in bringing you articles of interest in a timely fashion. Our thanks go to many but especially to Jack Lo Monaco WALYYK, for his typing (always at the last minute); to "Duke" Dugas, KALDTH, for collating, addressing, stamping and mailing the paper each month (sometimes working until the wee, small hours of the morning); to Gent Lam and Jeff Duquette for the many fine articles they each contributed (most without any arm twisting).

We must not forget to thank the unsung heroes of the kitchen, either. Each meeting without fail, Andy, WB1BZW, Rich, WALYYW, and Moe had coffee, donuts, and soda ready to cap off our meetings.

We were also very pleased to see our club membership grow in the past year. Very significantly, many of our new members joined at the end of a meeting after they had seen the club meeting and virtually all have continued to attend the meetings.

We also want to thank the Board of Directors who supported your officers throughout the year and the officers who continued to keep the club at the high plane established by their predecessors.

Mostly, our thanks go to the club membership for without your continuing support there would be no Hampden County Radio Association for each of us to enjoy.

Our new officers and directors will soon be elected and announced and we extend our best wishes to them on behalf of the club for a successful season in the 1980-1981 year. We wish each and every one of you a nice summer and look forward to seeing you at the first meeting in September.

73's

Paul, WALZKT

The President's Letter

It has been a truly pleasurable and rewarding experience serving you as your president. I thank all of you for your continuous and appreciative support through the past two years.

God bless and 73s,  
Larry WB1CJH

Your Editor Speaks.....

The time has come for the final editorial of the 1979-1980 season which marks the end of another successful year for HCRA. Specifics of our accomplishments will not be detailed here since Larry, WB1CJH, will comment at the banquet the many fine accomplishments of our club this past year.

This point in time also marks the halfway point in your editor's career as editor of Zero Beat. Producing Zero Beat has been a very enjoyable and rewarding enterprise

April 21, 1980

Hi Paul, WALZKT:

Its about time I sent this check for renewal. I really enjoy Zero Beat. I have worked quite a few of the western Mass guys since I have been here for 4 years.

I work Bob Young from near my home (KLNWE) all the time. I was back in last Dec/1st Jan80 to bury my father and Bob went way out of his way to make my stay a little better. He is one of the real "hams"!

I am still not good in the call book "Foreign" but anyone wanting direct do so thru my club DLQWW.

73,

John

DALUY/KALCZ

CW3 John C. Haskell

HQ 7th Sig Bde

APO New York 09028

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One of life's bitter ironies is that by the time you get to greener pastures, you can't climb the fence.

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#### FOR SALE

Wilson Mark II H.T. with 6 local freq., case, spk/mic., 2 antennae. Excellent condition. 18 mos. old. Must sell. Best offer.

Don, WB1BZG  
567 1033

#### FOR SALE

Cushcraft vertical antenna for 10-15-20 meters including necessary tuned radial wires.

\$ 30

Jack, WALYYK  
(413) 786 2556

#### TECHNICAL CORNER

So now you have a new Honshu Horizon all band, all mode transceiver with 15 multifunctions memory channels, 134 transistors, 3 knobs and 22 square buttons with built in 13 element cross polarization yagi. To some of us the instructions have been confusing and the manufacturer has graciously answered our query:

在所有747國際航線上，我們有特選免稅品供應。

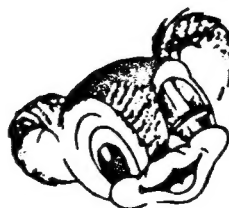
在銀行貨幣管制下，我們不能接受所有貨幣。如閣下想以別種貨幣付款，請向機上服務人員詢問有關的外幣兌換率。但閣下可以美金旅行支票付款（金額在美金100元以內）。

若因航機上現貨短缺所引至不便之處，我們深表歉意。同時由於載重量及體積的限制，我們祇作有限數量供應。在DC8及727的國際航線上只有香烟供應。

#### FOR SALE

Kenwood TR2200A, 12 channels fully crystallized for Springfield and Connecticut repeaters. Built in NiCads, Drake encoder mike, disappearing telescopic whip antenna, external SO 239 antenna jack, simulated leather case.

\$ 175.00 Call Glen, W1RRW  
in Amherst, 256 8238



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# CONNECTOR POTPOURRI

The following is a small list of some of the more commonly used coaxial connectors and adaptors for the UHF and BNC series. They are listed by military nomenclature (manufacturer's part number if no military equivalent) with a short description of the fitting.

By stocking a few of each type and a couple of standard coaxial cables, you should be able to connect almost any device using coaxial connectors. This will eliminate the multitude of special-

ly made up coax cables such as a UHF type connector to a BNC plug. Nothing is more aggravating than sitting down to make up a couple of coax cables so you can try out that new converter or antenna tuner.

The connectors can be purchased for a buck or two and the adaptors are usually under \$ 5.00. Granted a complete inventory will cost you a few bucks and some of the items Don't fall under the "over the counter" category, a reasonable inventory will be justified over the years.

Military or  
Manufacturer's  
Nomenclature

Description

PL259	UHF	series cable connector
UG175/u	RG58	Cable adapter for PL259
UG176/u	RG59	cable adapter for PL259
S0239	UHF	series panel receptacle accepts standard PL 259
PL258	UHF	series adapter allows 2 PL259's to be connected together
Amphenol 83-877	UHF	series adapter equivalent to 2 PL259's back to back
M359	UHF	series right angle adapter
UG363/u	UHF	series bulkhead connector (panel mount equivalent of 2 S0239's back to back
M358	UHF	series "T" adapter
UG260	BNC	series cable connector for RG59 coax
UG88	BNC	series cable connector for RG59 coax
UG261	BNC	series mating cable connector for UG260 connector on RG59 coax
UG89	BNC	series mating cable connector for UG88 connector on RG58 coax
UG492	BNC	series bulkhead connector
UG274	BNC	series "T" adapter
UG491A	BNC	series adapter (plug - plug)
UG491B	BNC	series adapter (jack - jack)
UG273/u		adapter BNC jack to UHF plug
UG255/u		adapter BNC plug to UHF jack
Pomona #2957		Adapter BNC receptacle to phono plug (super for Heath equipment)

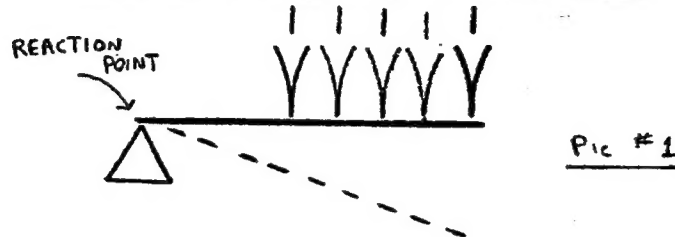
Gent Lam, W1CQF  
Technical Editor

## KEEPING IT UP!

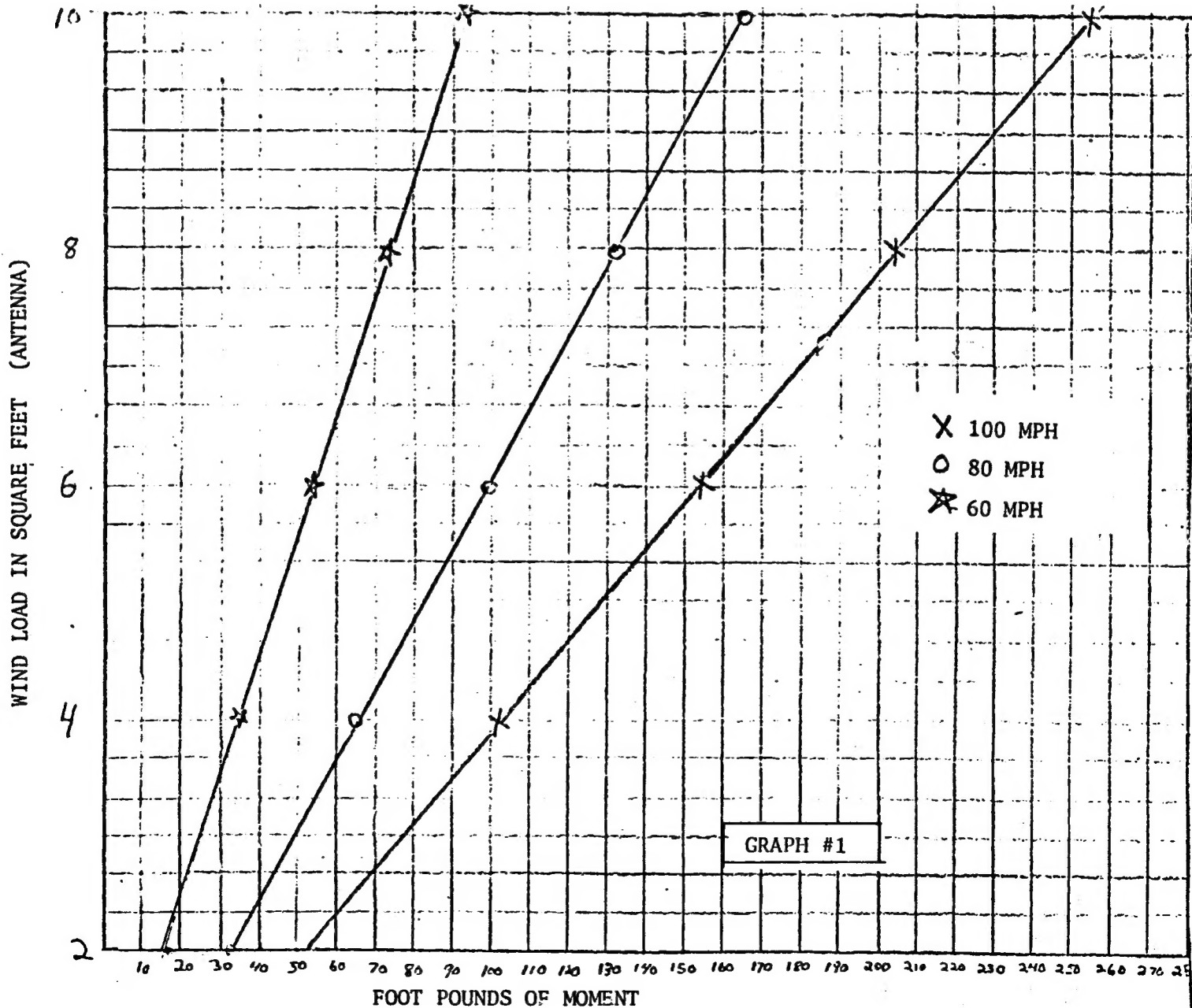
By Jeffrey J. Duquette K1BE

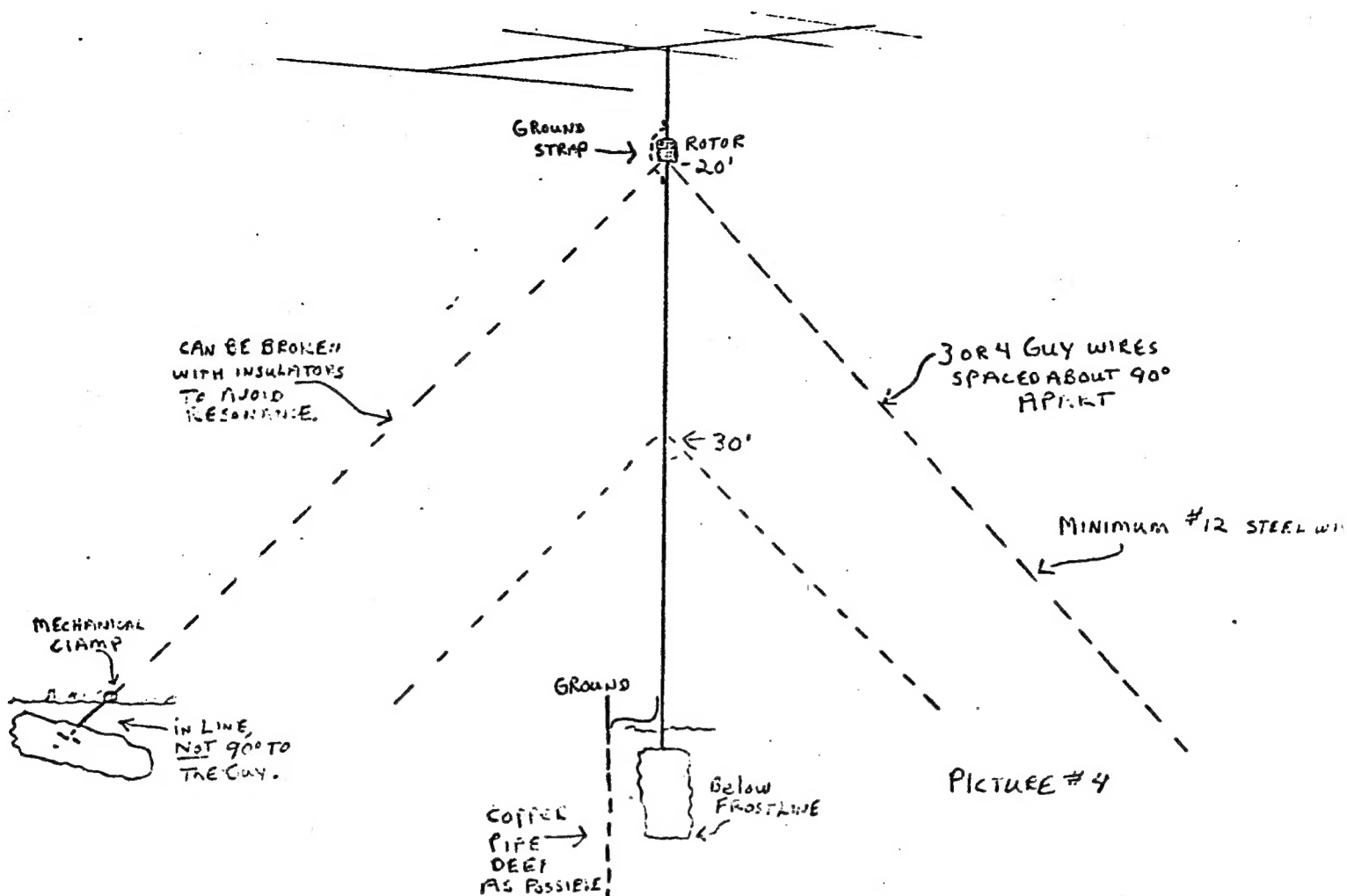
Inspired by W1JP's article in the February Intermod I thought I'd make a few short comments about structurally sound tower antenna installations. The thought and planning that goes in beforehand keeps your big beam in the air!

Whenever you put an antenna up, certain forces start to work to knock it down. The pressures involved can be much greater than imagined. (See picture #1) Here you can see how the surface the antenna shows to the wind, and the mast, create a force or "moment" that wants to push your tower over.



The size of the moment depends upon your antenna and the speed of the wind. Referring to graph #1, we can quickly compute the force:





If high winds are expected, you can increase your beam's life expectancy several ways. If possible, climb the tower and disconnect all cables and the rotor brake. Then the beam will swing in the wind rather than fighting it. (Obviously you don't do this if the high winds are already there! ) Turn the smallest side into the wind to offer the least surface area. With most antennas it would be as if the wind were rare DX and you wanted to work him. A tower that can be lowered will also reduce the moment on it.

The subject of grounding is an article by itself. Two quick things: put the ground rod deep as possible, and not into the concrete base. Run a ground strap across the rotor to be sure the antenna grounds out to the rest of the tower.

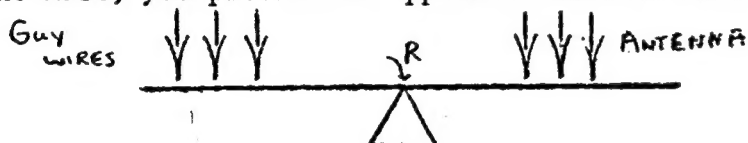
Using graph #1, let's take a hypothetical installation. You've just bought a "Super Signal Zapper", that has a 7 square foot wind factor. The manufacturer's specifications also tell you that this antenna will survive 100 miles-per-hour winds, which is a "worst case" situation to plan for. Looking at Graph #1, at 100 mph and 7 sq.ft, the moment is approximately 180 foot pounds. Referring to the February Intermod, or to graph #2, I see that a 1 inch schedule 80 pipe will withstand 200 ft/lbs.

Nom. Pipe Size	Maximum foot pounds of torque it can withstand	
1"	200	
1 1/4"	364	
1 1/2"	514	GRAPH #2
2"	913	

ALL FOR SCHEDULE 80 PIPE. FOR SCHEDULE 40, SUBTRACT ABOUT 25%.

However, I want to mount my beam up 4 feet from the rotor. So I must multiply the 180 x 4 to get 720 ft/lbs. This would destroy the 1" pipe, so looking at graph #2, I find out that 2" schedule 80 should be used to be safe. (Or I could mount the beam lower and use a smaller pipe.)

However, you don't have to use BIG pipes just to keep the beam up. By guying the mast, you provide an opposite reaction force to the moment. See picture #2.



PICTURE#2

So you could use a smaller pipe just by guying it below the antenna.

Due to the large number of different types of cables available, no iron-rules can be set forth for strengths. However, you can generally say that a #12 guy wire will support 1,000 pounds. Using 3 or 4 guys on your mast should hold against the wind with force to spare. A note of caution: kinks, poor mechanical connections, rust, abrasion, corrosion, and age drastically affect a cable's strength. Four guys at 90 degrees apart for every 30 feet of mast should give you the needed margin of strength.

Just a few other things to be aware of: Drilling holes in a mast or antenna boom drastically lowers its' strength. If you drill the hole at a reaction (stress) point, you're inviting catastrophic failure!

The guy anchors should be able to withstand the pull of the tower. I've seen \$1,000 dollar tower/antenna installations fall over because they used coffee cans filled with cement for anchors. Drawing #4 gives you the gist of a sound tower installation. Good luck and good engineering on your next tower!

73, K1BE

# REPEATER TIPS

## DO'S

**DO KEEP ALL TRANSMISSIONS SHORT.** Emergencies don't wait for monologues to be finished. If you talk to hear your own voice what you want is a tape recorder, not an fm rig.

**DO THINK BEFORE YOU TRANSMIT.** If you can't think of anything worth saying, don't say anything.

**DO PAUSE A COUPLE OF SECONDS BETWEEN EXCHANGES.** Someone with a high-priority need for the repeater may want to break in; also, some repeaters are configured so that a brief pause in transmissions is necessary to reset the three-minute timer.

**DO IDENTIFY PROPERLY** You must give your call at the beginning of a contact and every 10 minutes thereafter. At the end of the contact you must also give the call of the station with whom you were in contact.

**DO BE COURTEOUS.** A repeater is like a telephone party line, and requires the same kind of cooperation in its use.

**DO USE SIMPLEX WHENEVER POSSIBLE.** Leave the repeaters available for those who need them.

**DO USE THE MINIMUM POWER NECESSARY** to maintain communication. Not only is this an FCC requirement, it's also common courtesy.

**DO SUPPORT YOUR LOCAL REPEATER CLUB** even if it doesn't require all users to be members. Maintaining a good machine is an expensive undertaking, and you should do your share.

## DON'TS

**DON'T ABUSE AUTOPATCH PRIVILEGES.** Business messages are not permitted in the amateur service. Don't force the control operator to terminate your call in order to avoid a violation.

**DON'T BREAK INTO A CONTACT** unless you have something to add. Interrupting is no more polite on the air that it is in person.

**DON'T FORGET THAT AMATEUR RADIO IS ALLOCATED FREQUENCIES BECAUSE IT IS A SERVICE** not just a hobby. Don't neglect the public service aspects of Vhf-fm communication, such as accident reporting, emergency preparedness, etc.

**DON'T TRY TO PROVE WHAT A GREAT OPERATOR YOU ARE** by criticizing the operating techniques of others on the air. Instead, set an example which others will be proud to follow.

**DON'T MONOPOLIZE A REPEATER.** The best repeater users are the ones who do a lot of listening, and little transmitting.



**REMEMBER, WHAT YOU SAY OVER A REPEATER CAN BE HEARD OVER THOUSANDS OF SQUARE MILES** by anyone with an inexpensive "public service band" monitor. These people are potential hams; if they like what they hear on the air, they will want to get licenses and join us. Don't leave them with a bad impression of our hobby by making thoughtless or off-color remarks.

Hampden County Radio Association, Inc.  
Paul J. Kress, W1ZKT, Editor  
216 Eastwood Drive  
Westfield, Mass. 01085



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